Amendments to the Specification

Please replace the paragraph beginning on page 6, line 18, and starting with "In order to determine ..." with the following amended paragraph:

In order to determine a K plane 51 a function

$$\cancel{s_1(s,s_2)} = \begin{cases} \dfrac{ms_2 + (n-m)s}{n}, & s \le s_2 < 2 + 2\pi \\ \dfrac{ms + (n-m)s_2}{n}, & s > s_2 > s - 2\pi \end{cases}$$

$$s_1(s,s_2) = \begin{cases} \dfrac{ms_2 + (n-m)s}{n}, & s \le s_2 < s + 2\pi \\ \dfrac{ms + (n-m)s_2}{n}, & s > s_2 > s - 2\pi \end{cases} \tag{3}$$

is introduced, which function is dependent on non-negative, integer values n and m, where n>m. In this embodiment n=2 and m=1. However, other values n, m may also be chosen. The equation (1) would nevertheless remain exact, and only the position of the K planes 51 would change. Furthermore, the vector function

$$\mathbf{u}(s,s_2) = \begin{cases} \dfrac{[\mathbf{y}(s_1(s,s_2)) - \mathbf{y}(s)] \times [\mathbf{y}(s_2) - \mathbf{y}(s)]}{\|[\mathbf{y}(s_1(s,s_2)) - \mathbf{y}(s)] \times [\mathbf{y}(s_2) - \mathbf{y}(s)]\|} \bullet \operatorname{sgn}(s_2 - s), & 0 < |s_2 - s| < 2\pi \\ \dfrac{\dot{\mathbf{y}}(s) \times \ddot{\mathbf{y}}(s)}{|\dot{\mathbf{y}}(s) \times \ddot{\mathbf{y}}(s)|}, & s_2 = s \end{cases} \tag{4}$$

and the unity vector

$$\beta(s,\mathbf{x}) = \frac{\mathbf{x}-\mathbf{y}(s)}{|\mathbf{x}-\mathbf{y}(s)|} \tag{5}$$

are defined. The vector β then points from the radiation source position y(s) to the position x. In order to determine the K plane, a value $s_2 \varepsilon I_{PI(x)}$ is chosen so that y(s), $y(s_1(s, s_2))$, $y(s_2)$ and x are situated in one plane. This plane is referred to as the K plane 51 and the line of intersection between the K plane 51 and the detector surface is referred to as the K line 53. Fig. 6 shows a fan-like part of a K plane. The edges of the fan meet at the location of the radiation source. This definition of the K plane 51 is equivalent to solution of the equation

$$(\mathbf{x}-\mathbf{y}(s))\ .\mathbf{u}(s, s_2) = \mathbf{0},\ s_2 \in I_{PI(x)} \tag{6}$$

according to s_2. Thus, u is thus the normal vector of the K plane 51. In order to determine the vector function Θ(s,x,y) the vector

$$\mathbf{e}(s,\mathbf{x}) = \cos\gamma\ .\ \beta(s,\mathbf{x}) + \sin\gamma\ .\ \mathbf{e}(s,\mathbf{x}) \tag{7}$$

is defined. Using the definition for β and e, the vector function Θ(s,x,y) can be expressed as follows:

$$\mathbf{\Theta}(s,\mathbf{x},\gamma) = \cos\gamma\ .\ \beta(s,\ \mathbf{x}) + \sin\gamma\ .\ \mathbf{e}(s,\mathbf{x}) \tag{8}$$

Because both vectors β and e are oriented perpendicularly to u, the K angle γ indicates the direction of the vector Θ and hence the direction of a ray within a K plane.